

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently amended) An organic electroluminescence device comprising:

a semiconductor substrate, at least part of the semiconductor substrate forming a Peltier element including a heat absorbing portion and a heat radiating portion; and

an organic electroluminescence element arranged on or above the semiconductor substrate, wherein the organic electroluminescence element is arranged so that heat resistance between the organic electroluminescence element and the heat absorbing portion is less than heat resistance between the organic electroluminescence element and the heat radiating portion, and light emitted from the organic electroluminescence element exits from a side facing away from the semiconductor substrate,

wherein the Peltier element includes a heat absorbing electrode formed at the heat absorbing portion and a heat radiating electrode formed at the heat radiating portion, and the heat absorbing electrode of the Peltier element also serves as an electrode of the organic electroluminescence element or is directly connected to an electrode of the organic electroluminescence element.

2. (Original) The organic electroluminescence device according to claim 1, wherein the semiconductor substrate entirely forms the Peltier element with the heat absorbing portion formed at one side of the Peltier element, and the organic electroluminescence element is arranged on the semiconductor substrate at the same side as the heat absorbing portion.

3. (Canceled)

4. (Currently amended) The organic electroluminescence device according to ~~claim 3~~ claim 1, wherein the organic electroluminescence element includes an organic electroluminescence layer and two electrodes sandwiching the organic electroluminescence layer, with one of the two electrodes ~~being shared with~~ serving as the heat absorbing electrode.

5. (Currently amended) The organic electroluminescence device according to ~~claim 3~~ claim 1, wherein the organic electroluminescence element includes an organic electroluminescence layer and two electrodes sandwiching the organic electroluminescence layer, with one of the two electrodes being arranged on the heat absorbing electrode.

6. (Currently amended) The organic electroluminescence device according to ~~claim 3~~ claim 1, wherein the heat absorbing electrode and the electrode of the organic electroluminescence element are both supplied with voltage from a common power source.

7. (Canceled)

8. (Currently amended) The organic electroluminescence device according to claim 1, wherein the organic electroluminescence element includes:

an organic electroluminescence layer; and

a cathode and an anode sandwiching the organic electroluminescence ~~element layer~~, with voltage being applied between the cathode and the anode to emit light from the ~~entire~~ organic electroluminescence layer.

9. (Original) The organic electroluminescence device according to claim 1, further comprising a plurality of organic electroluminescence elements, wherein said organic electroluminescence element is one of the plurality of organic electroluminescence elements, with the organic electroluminescence elements being configured so that each organic electroluminescence element emits light independently from the other organic electroluminescence elements.

10. (Original) A liquid crystal display comprising:
the organic electroluminescence device according to claim 1; and
a liquid crystal panel, wherein the organic electroluminescence device functions as a backlight for the liquid crystal panel.

11. (Currently amended) An organic electroluminescence device comprising:
a substrate ~~including a semiconductor region~~;
a semiconductor region formed on the substrate;
Peltier elements and active driving elements formed in the semiconductor region, each a
~~Peltier element formed in at least part of the semiconductor region~~, the Peltier element including
a heat absorbing electrode and a heat radiating electrode; and

~~an~~ organic electroluminescence ~~element~~ elements each arranged on or above one of the heat absorbing ~~electrode~~ electrodes and electrically connected to one of the active driving elements, wherein light emitted from the organic electroluminescence element ~~exists~~ exits from a side facing away from the substrate.

12. (Currently amended) The organic electroluminescence device according to claim 11, wherein ~~the~~ each organic electroluminescence element is arranged on ~~the heat absorbing electrode directly or on~~ an insulating layer formed on the heat absorbing electrode, the insulating layer having high thermal conductivity.

13. (Original) The organic electroluminescence device according to claim 12, wherein the thermal conductivity of the insulating layer is greater than that of the substrate.

14. (Original) The organic electroluminescence device according to claim 11, wherein the substrate is transparent and insulative.

15. (Original) The organic electroluminescence device according to claim 11, wherein the substrate is made of metal.

16. (Currently amended) The organic electroluminescence device according to claim 11, ~~further comprising a plurality of organic electroluminescence elements, wherein said organic electroluminescence element is one of the plurality of organic electroluminescence elements,~~ with wherein each of the organic electroluminescence elements being configured is driven by the

corresponding active driving element so that each organic electroluminescence element emits light independently from the other organic electroluminescence elements.

17. (Original) A liquid crystal display comprising:
the organic electroluminescence device according to claim 11; and
a liquid crystal panel, wherein the organic electroluminescence device functions as a backlight for the liquid crystal panel.

18. (Currently amended) An organic electroluminescence device comprising:
a substrate including a semiconductor region:
a Peltier element formed in at least part of the semiconductor region, the Peltier element including a heat absorbing portion and a heat radiating portion; and
an organic electroluminescence element arranged on or above the substrate, wherein the organic electroluminescence element is arranged so that heat resistance between the organic electroluminescence element and the heat absorbing portion is less than heat resistance between the organic electroluminescence element and the heat radiating portion, and light emitted from the organic electroluminescence element exits from the substrate,
wherein the Peltier element includes a heat absorbing electrode formed at the heat absorbing portion and a heat radiating electrode formed at the heat radiating portion, and the heat absorbing electrode of the Peltier element also serves as an electrode of the organic electroluminescence element or is directly connected to an electrode of the organic electroluminescence element.

19. (Original) The organic electroluminescence device according to claim 18, wherein the substrate is transparent and insulative.

20. (Original) The organic electroluminescence device according to claim 18, further comprising a plurality of organic electroluminescence elements, wherein said organic electroluminescence element is one of the plurality of organic electroluminescence elements, the organic electroluminescence elements being configured so that each organic electroluminescence element emits light independently from the other organic electroluminescence elements.

21. (Original) A liquid crystal display comprising:
the organic electroluminescence device according to claim 18; and
a liquid crystal panel, wherein the organic electroluminescence device functions as a backlight for the liquid crystal panel.

22. (New) An organic electroluminescence device comprising:
a semiconductor substrate, a Peltier element being formed over substantially entire portion of the semiconductor substrate, wherein the Peltier element includes a semiconductor portion of the semiconductor substrate, a heat absorbing electrode, and a heat radiating electrode, wherein the heat absorbing electrode and the heat radiating electrode are located on opposite sides of the semiconductor portion so as to sandwich the semiconductor portion, and wherein the semiconductor portion lies along an area between the heat absorbing electrode and the heat radiating electrode; and

an organic electroluminescence element formed on the semiconductor substrate to be arranged on the heat absorbing electrode side, wherein light emitted from the organic electroluminescence element exits from a side facing away from the semiconductor substrate.

23. (New) The organic electroluminescence device according to claim 22, wherein the organic electroluminescence element includes an organic electroluminescence layer and first and second electrodes sandwiching the organic electroluminescence layer, the first electrode facing the heat absorbing electrode.

24. (New) The organic electroluminescence device according to claim 23, wherein the organic electroluminescence element is arranged on an insulating layer formed on the heat absorbing electrode.

25. (New) The organic electroluminescence device according to claim 23, wherein the heat absorbing electrode and the first electrode are both supplied with voltage from a common power source.

26. (New) The organic electroluminescence device according to claim 23, wherein one of the first and second electrodes is a cathode and the other one of the first and second electrodes is an anode, with voltage being applied between the cathode and the anode to emit light from the entire organic electroluminescence layer.

27. (New) The organic electroluminescence device according to claim 22, further comprising a plurality of organic electroluminescence elements, wherein said organic electroluminescence element is one of the plurality of organic electroluminescence elements, with the organic electroluminescence elements being configured so that each organic electroluminescence element emits light independently from the other organic electroluminescence elements.

28. (New) A liquid crystal display characterized by:
the organic electroluminescence device according to claim 22; and
a liquid crystal panel, wherein the organic electroluminescence device functions as a backlight for the liquid crystal panel.